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Abstract:

Objective: After a needlestick injury (NSI) with contaminated blood, there is a risk of seroconversion. Statutory accident insurance (SAI) claims data were used to determine the numbers of seroconversions for hepatitis B and C viruses (HBV, HCV) and for HIV.

Materials and methods: Cases of HBV, HCV or HIV infection recognised as occupational diseases between 2006 and 2015 were selected from the BGW (Berufsgenossenschaft für Gesundheitsdienst und Wohlfahrtspflege) database. Cases where an NSI was reported to the accident insurer before the diagnosis of the infectious disease was made were included in the analysis. The causal link between the infection and the NSI identified was estimated based on diagnostic findings in medical case files.

Results: In total, 566 cases with an occupation-related HBV, HCV or HIV infection were identified, including 44 cases where an NSI had been reported before diagnosis. Data on file indicated a possible causal link in 34 cases. In 16 of the 34 cases, seroconversion after the NSI was proven by diagnostic findings; in 13 of the 34 cases, seroconversion was possible but not proven because of the lack of initial findings. The index case was known in 23 of the 34

cases. The injuries occurred most often during waste disposal and high-risk procedures such as taking blood samples. The injuries were most often caused by cannulas for intravenous puncture. Subcutaneous devices were involved in two NSIs but there was no information on the initial serology or known index case.

Conclusions: It is possible to identify seroconversion in SAI claims data. However, data on the injured person's initial infection status is often incomplete and this makes it difficult to assess any causal link. The incidence of seroconversions resulting from injuries from subcutaneously applied devices is apparently low; this is consistent with the literature.

Full Text

Reference:

Dulon, M., Wendeler, D. and Nienhaus, A. (2018) Seroconversion after needlestick injuries – analyses of statutory accident insurance claims in Germany. *GMS Hygiene and Infection Control*. July 6th. eCollection 2018.

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